

### Westwood Generating depends on Plattco valves to reduce maintenance costs, sustain efficient operations

Preventative maintenance is serious business at the Westwood Generating Station, a 36MW waste coal-fired power plant in Eastern Pennsylvania. Because the plant burns highly corrosive legacy coal left over from long-ago coal mining operations, an aggressive maintenance schedule is required to maximize plant output.

"The waste coal we burn is actually more rock than coal," explains Ron Graver, maintenance planner at the Westwood Generating Station, which is part of Integrays Energy Services. "Because the type of coal we burn puts added stress on the crushers in our fuel system, we take one of our two fuel lines down every three weeks to replace the hammers in the crushers."

Replacing the hammers can be completed in five hours. But before Westwood Generating installed Plattco valves, the scheduled maintenance project typically had to be extended beyond five hours to perform additional maintenance work on the rotary valves installed on the fuel line when the plant went online in 1986.

According to Graver, it took the maintenance team eight hours every three weeks to complete work on the rotary valves and, as a result, the Westwood Generating plant was required to keep one fuel line down an extra three hours every three weeks.

#### Problems with rotary valves caused unscheduled downtime

"But the biggest problem with the rotary valves was the unscheduled down time," he explains. "We were having problems with the rotary valves because they have many working parts and require very tight tolerances in order for them to work properly," Graver said. "The rotary valves were constantly getting plugged and this was throwing off the timing for the entire fuel system, causing it to shut down."



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Ron Graver, Maintenance Planner,  
Westwood Generating Station,  
Integrays Energy Services

#### facts at a glance:

⇒ <b>Company:</b>	Westwood Generating Station, Integrays Energy Services
⇒ <b>Location:</b>	Tremont, PA
⇒ <b>Industry:</b>	Electrical Generation
⇒ <b>Plant Capacity:</b>	39 Megawatts
⇒ <b>Energy Source:</b>	Waste Coal
⇒ <b>Operational Since:</b>	1986
⇒ <b>Employees:</b>	20

#### Plattco products:

- Two 16" H-1699 Double Flap Airlock® Valves in the fuel system
- Two 10" H-1075 Double Flap Airlock® Valves on the ash system.

"It was also a safety issue for us," Graver says. "The valves are located next to the boiler so our maintenance staff was spending a lot of extra time working in an extremely hot environment."

To address the problem, Westwood Generating decided to try Plattco's patented Double Flap Airlock® valve. According to Graver, a 16-inch H-1699 valve was installed on one fuel line during an outage. "The H-1699 worked so well that we replaced the remaining rotary valves with the same Plattco H-1699 valves," Graver says. The Plattco H-1699 valves are hydraulically actuated and run at six cycles per minute. They feed 55 tons of coal per hour into the boiler.

Two years later, Westwood Generating replaced the two rotary valves on the plant ash system with Plattco 10-inch H-1075 valves. "We liked the way the Plattco valves worked in the fuel system, so we decided to put them on the ash system, too," Graver explains. "It was the same situation in the ash system. The rotary valves required too much maintenance and they weren't holding up."

### **Plattco valves reduce fuel line downtime**

Since installation in the early 1990s, the Plattco valves have required virtually no unscheduled maintenance time. "Over the years, the Plattco valves have really helped us maintain an efficient operation," Graver says. "They have reduced our downtime greatly. Because we aren't spending time working on the valves, our maintenance team can work on other projects that help with our overall efficiency."

Westwood Generating replaced the original 16-inch valves on the fuel line after 15 years and a year later chose to upgrade the new valves with mechanical seals that will further reduce the maintenance requirements. "Because the fuel we burn is very corrosive, the packing on the seals wears out sooner than in a conventional coal-fired system," Graver explains. "Our Plattco representative recommended installing the mechanical seals, which eliminate the need to replace the packing seal and bearing."

"We don't have problems with our Plattco valves, so there really isn't much of a need to communicate with the Plattco team," Graver says. "But when we do communicate with Plattco representatives they've always been very accommodating and helpful."

## **Business Benefits**

- Significantly reduced scheduled and unscheduled plant downtime
- Increased plant efficiency
- Lowered labor cost
- Increased opportunity for maintenance staff to focus on high-value projects
- Increased safety

## **About Plattco**

Plattco Corporation is the recognized leader for valves that solve material handling problems in a wide variety of industries. Plattco specializes in the design and manufacture of Double Flap Airlock® Valves and associated multi-purpose slide gates. Plattco is an integrated manufacturer with engineering capabilities, a pattern shop, foundry and machine shop at its facilities in Plattsburgh, NY. Plattco invented the double flap material handling valve in 1960 and has established a proven record of innovation. Plattco was the first to install double flap airlock valves on the windbox at iron ore mines and on the clinker coolers at cement plants. Founded in 1897, Plattco began as a gray iron foundry, producing drainage castings, stock valves and other machined castings for the paper, mining and other regional industries. Plattco is employee owned.

**Plattco**  
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Founded in 1897



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